A Condition on LF-Representations

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A CONDITION ON LF-REPRESENTATIONS*

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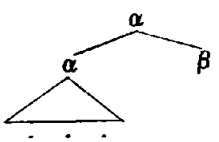
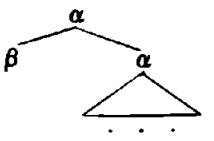
1. Introduction

There is a traditional distinction between two different types of phrase, namely those which function as Complements, and those which function as Adjuncts. In one version of X-bar theory, Complements project head X onto X-bar, and Adjuncts project X-bar onto X-bar (not double bar; cf. Radford (1988:176)). We will slightly extend this structural definition of Adjuncts to incorporate any β in the following configuration:

(1) a. 

b. 

That is, regardless of the number of bars of α, any β that is Chomsky-adjoined to it is to be regarded as an Adjunct. Furthermore, it is irrelevant whether β is base-generated in place or adjoined to α by movement; this means that some YP complement to X becomes an Adjunct if it is moved somewhere by adjunction. We will see in this paper that this definition of Adjuncts in purely structural terms makes it possible to capture a linguistically significant generalization.

2. "Island"-hood of Adjoined Phrases

It is a well-known fact that an extraposed constituent generally constitutes an island for extraction. Thus consider (2):

(2) a. I saw [$_{NP}$ a picture of George Bush] yesterday
b. I saw [$_{NP}$a picture t] yesterday [$_{PP}$ of George Bush]
c. *who$_i$ did you see [$_{NP}$ a picture t] yesterday [$_{PP}$ of t_i]

In fact, any constituent moved by adjunction is an island, as illustrated by examples like the following:

(3) a. I saw t yesterday [$_{NP}$ a picture of George Bush]
b. *who$_i$ did you see t yesterday [$_{NP}$ a picture of t_i]

(4) a. I talked [$_{PP}$ to George Bush] yesterday
b. I talked t yesterday [$_{PP}$ to George Bush]
c. *who$_i$ did you talk t yesterday [$_{PP}$ to t_i]

(5) a. John tried [$_{CP}$ to kiss Mary] yesterday
b. John tried t yesterday [$_{CP}$ to kiss Mary]
c. *who$_i$ did John try t yesterday [$_{CP}$ to kiss t_i]

(6) a. John seemed [$_{IP}$ to be certain of his success] yesterday
b. John seemed t yesterday [$_{IP}$ to be certain of his success]
c. *what$_i$ did John seem t yesterday [$_{IP}$ to be certain of t_i]

(7) a. John seemed [$_{AP}$ afraid of his failure] yesterday
b. John seemed t yesterday [$_{AP}$ afraid of his failure]
c. *what$_i$ did John seem t yesterday [$_{AP}$ afraid of t_i]

Given these facts, one might be tempted to propose a constraint to the effect that no element may be extracted out of a phrase that has been moved by adjunction, or more generally, out of an Adjunct as defined in § 1. However, notice that all of the adjoined phrases which are apparently islands for extraction were Complements, not Adjuncts, before being moved. Thus, nothing prevents *wh*-movement out of a Complement like the one in (2a) to give a sentence like (8):

(8) who$_i$ did you see [$_{NP}$ a picture of t_i] yesterday

And if movement by adjunction applies to a sentence like (8), ungrammatical sentences like (2c) and (3b) result, unless we

postulate another constraint to the effect that no phrase containing a trace may be moved. This is quite undesirable, since we would need two quite independent constraints on movement to block ungrammatical sentences of the same kind. What we need, instead, is a condition on representation, not on movement, to the effect that no Adjunct may contain an unbound trace:

(9) * $[_{\alpha} \ldots t \ldots]$, where t is free in α =Adjunct

Since each of the ungrammatical sentences above contains an Adjunct defined in § 1 and this Adjunct contains a trace free in it, the ungrammatical sentences are all filtered out by (9), which we shall call the Unbound Trace Filter (UTF).

Now the question is: At what level does UTF apply? Although Chomsky and Lasnik (1977) put filters into what is now called the PF-component, there seems to be no *a priori* reason to assume that filters apply only at PF. Fiengo (1980), for example, proposes filters applying at LF. If in fact there are filters applying at LF, such filters must be universal in nature; the language learner, after all, has little direct evidence bearing on them, as is the case with LF-rules like Quantifier Raising (QR). Cf. Chomsky (1981:11). The next section is devoted to showing that in Japanese, UTF applies at LF, which gives a solid substance to the universal nature of the proposed filter.

3. On the Universality of UTF: A Case Study from Japanese[1]

3.1. A Fragment of the Grammar of dake. As is argued in Sano (1985, 1988), a constituent with a focalizing particle *dake* undergoes QR, and a sentence like (10) below is converted to (11) at LF via QR:

(10) kono inu-wa, migime-dake-o tsumur-u
This dog-Top. right-eye-only-Acc. close-Pres.

"This dog closes only [its] right eye"

(11) [$_S$ migime-dake$_i$ [$_S$ kono inu-wa t_i-o tsumur-u]]

When the sentence to which QR applies involves clausal embedding, and if the expression subject to QR is within the embedded clause, QR gives more than one LF-representation, giving ambiguous interpretations of the sentence, as expected:

(12) [$_{S1}$ kono inu-wa [$_{S2}$ migime-dake-o tsumur-u] koto-ga
Comp-Nom.
deki-ru].
can-Pres
"this dog can close only [its] right eye"

(13) a. [$_{S1}$ kono inu-wa [$_{S2}$ migime-dake$_i$ [$_{S2}$ t_i-o tsumur-u]] koto-ga deki-ru]

b. [$_{S1}$ migime-dake$_i$ [$_{S1}$ kono inu-wa [$_{S2}$ t_i-o tsumur-u] koto-ga deki-ru]]

Sentence (12) is ambiguous, meaning either that what this dog can do is to close only its right eye (i.e., to "wink its right eye"), or else that it is only its right eye that this dog can close (i.e., it cannot close its left eye). The first reading is obtained from the LF-representation (13a), where *migime-dake* is adjoined to S_2, to which its scope is restricted. The second reading, on the other hand, is obtained from (13b), where *migime-dake* is adjoined to S_1, over which its scope ranges. The ambiguity of sentence (12) is thus an automatic consequence of the ambiguity of the scope of the *dake*-phrase assigned by QR.

However, it is not always the case that a sentence like (12) presents scopal ambiguity. Thus consider the following:

(14) [$_{S1}$ kono inu-wa [$_{S2}$ migime-dake-o tsumur-u] koto-mo deki-ru]
"this dog can also close only its right eye"

The structure of sentence (14) is quite similar to that of (12), the only difference being that the Nominative Case marker *ga* attached to the embedded S with *koto* in (12) is replaced by *mo* in (14). This *mo* is used as a focalizing particle meaning "also." What concerns us is the fact that the scope of *migime-dake* is here restricted to the embedded S, namely S_2; the sentence can only mean that what this dog can also do is to close only its right eye, and it cannot mean that "it is only its right eye that this dog can also close." Clearly, the presence of *mo* is responsible for the lack of the matrix scope reading of the *dake*-phrase. We now turn to the focalizing use of *mo*.

3.2. A Fragment of the Grammar of Mo. *Mo*, like *dake*, also triggers QR, as argued in Sano (1988). Thus a sentence like (15) below has LF-representation (16):

(15) boku-wa Akiko-to-mo deetosu-ru
I with date-Pres.
"I date also with Akiko"

(16) $[_S$ (Akiko-to-mo)$_i$ $[_S$ boku-wa t_i deetosu-ru]]

The LF-movement of a constituent with *mo* by QR accounts for the ambiguity of a sentence like the following:

(17) $[_{S1}$ boku-wa $[_{S2}$ Akiko-to-mo Emiko-to-mo deetosu-ru]
koto-ga deki-nai]
can-Neg.
"I cannot date with Akiko and with Emiko"

On one reading, sentence (17) means that I cannot date both with Akiko and with Emiko, where the two *mo*-phrases are within the scope of negation: "it is not the case that I can date both with Akiko and with Emiko." Although this reading is weak, we will

see below in § 3.5 that it must be admitted in principle. On another reading, the sentence means that I can date neither with Akiko nor with Emiko, where in this case the *mo*-phrases have scope over the negation: "for both Akiko and Emiko, I cannot date with them." This scope ambiguity is represented by the following two LF-representations obtained by QR:

(18) a. $[_{S1}$ boku-wa $[_{S2}$ {Akiko-to-mo Emiko-to-mo}$_i$ $[_{S2}$ t_i deetosu-ru]] koto-ga deki-nai]

b. $[_{S1}$ {Akiko-to-mo Emiko-to-mo}$_i$ $[_{S1}$ boku-wa $[_{S2}$ t_i deetosu-ru] koto-ga deki-nai]]

In (18a), the *mo*-phrases are adjoined to the embedded S, which is within the scope of negation. In (18b), on the other hand, they are adjoined to the matrix S and have scope over the negation.

Keeping this much in mind with regard to *mo*, let us return to the problem of why in a sentence like (14) the scope of the *dake*-phrase is restricted to the embedded clause.

3.3. First let us consider what the possible LF-representations of (14) are like. Because a constituent with *mo* as well as one with *dake* is subject to QR, the embedded clause with *koto* in (14) is subject to QR, since *mo* is attached to it, giving (19):

(19) $[_{S1}$ {$[_{S2}$ migime-dake-o tsumur-u]koto-mo}$_i$ $[_{S1}$ kono inu-wa t_i deki-ru]]

In (19), the *mo*-phrase indexed *i* is adjoined to S_1. Now *migime-dake* is also subject to QR. If it is adjoined to S_2, this gives (20):

(20) $[_{S1}$ {$[_{S2}$ migime-dake$_j$ $[_{S2}$ t_j-o tsumur-u]] koto-mo}$_i$ $[_{S1}$ kono inu-wa t_i deki-ru]]

(20) is a representation in which the scope of *migime-dake* is restricted to S_2, which is a possible reading of (14). What if *migime-dake* is adjoined to S_1, as in the following?

(21) [$_{S1}$ migime-dake$_j$ [$_{S1}$ ([$_{S2}$ t_j-o tsumur-u] koto-mo)$_i$
[$_{S1}$ kono inu-wa t_i deki-ru]]]

In (21), the scope of *migime-dake* is over the entire S, which is not a possible reading of (14), as we saw in § 3.1. Notice that, in both (20) and (21), the *mo*-phrase is an Adjunct, since it is adjoined to S_1, and contains a trace bound by the *dake*-phrase. However, the *dake*-phrase that binds the trace is within the Adjunct *mo*-phrase in (20) but not in (21). In other words, the trace is free in the Adjunct *mo*-phrase in (21), which is precisely the case barred by UTF. Thus, UTF correctly rules out the reading corresponding to LF-representation (21).

Note that it is irrelevant whether QR applies first to the *mo*-phrase or to the *dake*-phrase. If QR applies to the *dake*-phrase first and adjoins it to the matrix S, this intermediate LF-representation is not one ruled out by UTF, since the *mo*-phrase out of which the *dake*-phrase has been extracted is not an Adjunct at this stage. But the *mo*-phrase containing the trace free in it must also be adjoined to (one of the two segments of) the matrix S, becoming an Adjunct barred by UTF.

Now let us see what type of sentences UTF rules out at LF. Notice that in any sentence of the form (22),

(22) [$_{S1}$ ... [$_{QP1}$ ... [$_{S2}$ ... QP_2 ...]...]...]

where QP is a phrase subject to QR, the scope of QP_2 must remain within S_2 and hence within QP_1, and cannot extend over to S_1. The reason is that since QP_1 will be adjoined to S_1 by QR and hence will be an Adjunct at LF, if QP_2 were adjoined over S_2 to S_1, the trace bound by QP_2 would remain free in QP_1 an

Adjunct. We shall see below that the prediction made by UTF is in fact born out by a number of sentences of the type (22).

3.4. It follows from UTF that not only a *mo*-phrase but also a *dake*-phrase cannot contain a trace free in it, since it also will be an Adjunct at LF via QR. Thus consider the following:

(23) [$_{S1}$ boku-wa [$_{QP1}$ [$_{S2}$ {$_{QP2}$ Akiko-to-mo Emiko-to-mo} deetosu-ru] koto-dake] ga deki-nai]
"I can't only date both with Akiko and with Emiko"

In (23), the scope of QP_2 must remain within QP_1, the *dake*-phrase. Thus the sentence means that it is only dating both with Akiko and with Emiko that I can't do, and it cannot mean that "it is both with Akiko and with Emiko that I can't only date," where "both with Akiko and with Emiko" corresponding to the *mo*-phrase is outside of the scope of "only..." corresponding to the *dake*-phrase. Similarly, consider the following sentence:

(24) [$_{S1}$ kono inu-wa [$_{QP1}$ [$_{S2}$ [$_{QP2}$ migime-dake] o tsumur-u] koto-dake] ga deki-ru]
"this dog can only close only [its] right eye"

(24) is a little awkward, due to the two *dake*-phrases in one sentence. But as far as it is interpretable, it means only that what this dog can only do is to close only its right eye (i.e., to "wink its right eye"), and it cannot mean that "it is only its right eye that this dog can only close"; the scope of QP_2 cannot be over that of QP_1 and must remain within S_2.

3.5. The Rule of Focus. Consider the following sentence:

(25) boku-wa eigo-ga deki-ru
English

"I can [do] English"

If (25) is read with *ga* unstressed, this *ga* is taken simply as the Nominative Case marker on *eigo*. But if *ga* assumes a heavy stress, it is taken to indicate a focus on *eigo*, and the sentence means something like "it is English that I can [do]" or "I can [do] ENGLISH" with an extra stress on *English*.[2] Following Chomsky (1981:196), we assume that the rule of focus moves the focalized constituent to the clause-initial position;[3] to state the same thing in present terms, we assume QR to apply to the focalized constituent. Thus sentence (25), if *ga* assumes a heavy stress, is converted by QR to the following LF-representation:

(26) $[_S$ eigo-ga$_i$ $[_S$ boku-wa t_i deki-ru]]

The assumption that the constituent focalized by *ga* undergoes QR accounts for the lack of ambiguity of a sentence like the following:

(27) $[_{S1}$ kono inu-wa $[_{QP1}$ $[_{S2}$ $[_{QP2}$ migime-dake] o tsumur-u] koto-GA] deki-ru]

This sentence, in which *ga* is stressed, has only an interpretation in which the scope of QP_2 is within QP_1, which will be an Adjunct at LF. Thus it only means something like it is closing only its right eye that this dog can do, where the scope of *only its right eye* is within the focalized part of the cleft construction; the reading in which *migime-dake* has scope over S_1 is ruled out by UTF, as contrasted with (12), in which the same *dake*-phrase has the matrix scope because the constituent with the unstressed *ga* containing the *dake*-phrase does not undergo QR and hence remains a Complement. Similarly, consider the following:

(28) [$_{S1}$ boku-wa [$_{QP1}$ [$_{S2}$ {$_{QP2}$ Akiko-to-mo Emiko-to-mo} deetosu-ru] koto-GA] deki-nai]

Here again, the scope of QP_2 must remain within that of QP_1, and the sentence only means something like "it is dating both with Akiko and with Emiko that I cannot do"; it lacks the reading in which QP_2 has scope over S_1 and hence over the negation, unlike (17) in which *ga* is unstressed.

In discussing sentence (17) in § 3.2, we noted that the reading corresponding to LF-representation (18a) in which the scope of the *mo*-phrases is restricted to the embedded S is weak. In fact, some might doubt whether this reading is real. However, the fact about sentence (28), and sentence (23) for that matter, shows clearly that theory has to admit the narrow scope reading of the *mo*-phrases in a sentence like (17), for the narrow scope reading of the *mo*-phrases in (28) or (23), which is the only possible reading, presupposes the existence of LF-representation (18a).

4. On the "Evolution" of UTF

In § 3 we saw a number of Japanese examples in which logically possible readings are blocked at LF by UTF, which was formulated in § 2 in view of English examples. In both English and Japanese cases, the effect of UTF is to rule out a representation in which an Adjunct as defined in § 1 contains a trace free in it. Furthermore, in all of the examples we saw, each of the Adjuncts in question was the one which functions as a focus of the sentence. To take an English case, the effect of putting the NP object at the end of a sentence as in (3a), repeated below,

(3) a. I saw t yesterday [$_{NP}$ a picture of George Bush]

is to make the NP a focus of the sentence. Notice further that

every *wh*-word inherently functions as a focus as opposed to "presupposition." And we can now see that *wh*-movement, which may be regarded as equivalent in function to the rule of focus, out of a focalized constituent like the NP object in (3a) is impossible. This suggests that the *raison d'être* of UTF is to avoid generating a confusing sentence in which some focus is "detached" from another focus. Note that it is innocuous to have more than one focus in a sentence, as long as there is no "focus-detachment":

(29) a. who saw yesterday a picture of George Bush
b. JOHN gave A BOOK to MARY

Much the same can be said of Japanese cases. We saw that it is impossible to "detach" a constituent with such a focalizing particle as *dake* or *mo* from a constituent focalized by *dake, mo,* or GA. Such "detachment" would also create a confusing interpretation at LF. Thus, it might be said that the "origin" of UTF is traced to such a confusion-reduction.

However, not all Adjuncts function as foci. In particular, an Adjunct in the traditional sense, that is, one as opposed to a Complement, usually functions simply as a modifier of the head of a phrase. For example, in the following sentence,

(30) I met a student of physics with long hair

of physics is a Complement to *student* and *with long hair* is an Adjunct which modifies *student (of physics)* but does not necessarily function as a focus of the sentence. Radford (1988: 175-196) argues convincingly that in NP, whereas Complements expand N into N-bar, Adjuncts expand N-bar into N-bar (not N-double-bar).[4] Thus an Adjunct in NP belongs to Adjunct in our sense. Therefore, our UTF blocks *wh*-movement out of an Adjunct in NP, whether or not the Adjunct is interpreted as a focus.

And in fact extraction of this sort is impossible, as seen in the following from Radford (1988:191):

(31) a. what branch of physics are you a student of t
b. *what kind of hair are you a student with t

Notice that it hardly seems likely that (31b) is more "confusing" than (31a) in any relevant sense of the term. Should we, then, interpret the unacceptability of a sentence like (31b) as a consequence of UTF? It seems that we should, since from the viewpoint of autonomy of Syntax (including the syntax of LF), no syntactic constraints should make reference to extragrammatical factors such as processing strategy, just as no children can have access to the "etymology" of any constraints whatsoever in language acquisition. In this connection, Newmeyer (1983:109) makes an interesting claim:

> There are enough examples of constraint-violating sentences that seem (intuitively) to present processing difficulties that it seems reasonable to assume that constraints arose historically to facilitate the production and comprehension of sentences. But what has apparently happened is that, in the course of time, the processing-derived constraints have taken on a grammatical "life of their own," so to speak. Now some constraints do seem to have a confusion-reducing effect and some seem not to.

If we assume UTF to be relevant to an Adjunct in NP, the island nature of a relative clause is an automatic consequence of UTF:

(32) a. I saw [$_{NP}$ a boy [$_{CP}$ who hit Mary]]
b. *who did you see [$_{NP}$ a boy [$_{CP}$ who hit t]]

Radford (1988:194) claims that a restrictive relative clause is

an Adjunct to N-bar, on a par with other Adjuncts. Another possible analysis is that it is an Adjunct to NP, as in (33):

(33) $[_{NP}\ [_{NP}$ a boy$][_{CP}$ who hit Mary$]]$

In either analysis, our definition of Adjuncts takes a restrictive relative clause to be an Adjunct subject to UTF, thus accounting for the ill-formedness of (32b).

5. UTF Applying at LF in English

In § 3 we saw that UTF applies at LF in Japanese. But we have not seen yet positive evidence that UTF applies at LF in English also. All of the English examples we saw are compatible with the assumption that UTF applies in English at S-structure or PF, although it is quite unnatural that the same condition apply at different levels in different languages. In this section we will see direct evidence that UTF applies at LF in English, thus laying firm underpinnings on the universality of UTF.

It is well recognized that *wh*-movement applies at LF as well as in syntax. Thus in a sentence like the following,

(34) who saw what

what undergoes *wh*-movement at LF, leaving a trace in its original position. Thus the LF-representation of (34) is roughly as follows:

(35) $[\text{what}_j\ \text{who}_i\ [t_i\ \text{saw}\ t_j\ ]]$

Now consider the following sentence:

(36) who saw $[_{NP}$ a picture of whom$]$ yesterday

In (36), *whom* undergoes *wh*-movement at LF, leaving its trace in

the NP object. However, if a constituent containing *whom* in syntax becomes an Adjunct, the sentence becomes unacceptable:

(37) a. *who saw [$_{NP}$ a picture t] yesterday [$_{PP}$ of whom]
b. *who saw t yesterday [$_{NP}$ a picture of whom]

The reason should now be obvious; the bracketed PP in (37a) and the bracketed NP in (37b) are Adjuncts and cannot contain a trace free in it.

In § 4 we noted the island-nature of a relative clause. But consider the following example:

(38) who likes people [who live where] very much

The bracketed clause is a relative clause, which is an Adjunct. But this Adjunct contains a *wh*-phrase with a matrix scope, namely *where*. In other words, the Adjunct contains a trace free in it at LF, which should be barred by UTF. Notice that extraction of *where* in *syntax* is still barred, as in (39):

(39) *where$_i$ do you like people [who live t_i] very much

Do these facts argue against the claim that UTF applies at LF? I think not, for consider the following:

(40) *who likes [people t_i] very much [who live where]$_i$

The unacceptability of (40) indicates that the extraposed relative clause cannot contain a trace free in it at LF. The question, then, is why the phrase subject to *LF*-movement, in an unextraposed relative clause, is exempt from UTF in spite of the Adjunct status of the clause. In fact, the phenomenon is not restricted to a relative clause. Thus consider the following:

(41) *which class$_i$ did you fall asleep [$_{PP}$ during t_i]

In (41), the bracketed PP is a base-generated Adjunct,[5] which contains a trace free in it. Thus the sentence is properly ruled out by UTF. However, an Adjunct of this sort can contain a *wh*-phrase with a matrix scope, as in the following:

(42) who fell asleep [during which class] yesterday

If this Adjunct is moved, whether rightward or leftward, the sentence becomes unacceptable:

(43) a. *who fell asleep yesterday [during which class]
b. *who [during which class] fell asleep
cf. who, during Chomsky's class, fell asleep

The unacceptability of sentences like (43) is straightforwardly accounted for by UTF. It seems, then, that UTF does not strictly apply to the trace created by LF-movement if the Adjunct containing the trace is a base-generated one, as in (38) and (42).[6] If the Adjunct is one created by movement, UTF applies whether the trace in the Adjunct is created in syntax or at LF, as shown by, e.g., (3b) and (37b). Although the reason seems to be related to the *raison d'être* of UTF discussed in § 4, we have to await future research on this issue.

6. QR and *Wh*-movement at LF

In § 5 we saw that *wh*-movement at LF in English supports the claim that UTF applies at LF in English. The question now arises as to whether QR in English also points to the same conclusion. This section shows that there is some apparent evidence that the answer is negative, and suggests a possible solution to the question of why *wh*-movement at LF obeys UTF and QR does not seem to.

First, S. Homma has pointed out to me that the inversely linked construal of a sentence like (44) poses a problem for UTF:

(44) someone in every city voted for the candidate

In (44), *every city* has the entire S as its scope, and if the LF-representation of (44) is as in the following,[7]

(45) $[_S$ every city$_j$ $[_S$ $[_{NP_i}$ someone in t_j] $[_S$ t_i ...]]]

this representation should be ruled out by UTF, since NP_i is an Adjunct and contains a trace free in it. Note, however, that the following example in which a *wh*-phrase replaces *every city* is correctly ruled out by UTF:

(46) *someone in which city voted for the candidate

Note further that UTF does not rule out the following sentence in which the head of the subject phrase is also a *wh*-phrase:

(47) who in which city voted for the candidate

The reason is that the subject is not an Adjunct at LF; rather, it is in the specifier position of CP.[8]

Second, Homma points out an example like the following:

(48) who$_i$ did you see $[_{NP_j}$ some picture of t_i]

At LF, NP_j becomes an Adjunct via QR, hence a representation which should be barred by UTF results. But consider (49):

(49) *$[_{CP}$ who$_i$ did you see $[_{NP_j}$ which picture of t_i]]

Since the specifier position of CP is already occupied by *who*$_i$ in syntax, *wh*-movement of NP$_j$ at LF probably makes it an Adjunct. If so, it is ruled out by UTF. Note that the following example is acceptable:

(50) [$_{CP}$ [$_{NP_j}$ which picture of whom] did you see t_j]

NP$_j$ is in the specifier position of CP and is not an Adjunct. Thus even if *whom* is extracted from NP$_j$ at LF, UTF is irrelevant.

The question is, then, how the acceptability of (44) and (48) and the unacceptability of (46) and (49) are to be accommodated. Or perhaps they should not be accommodated; it may be that (46) and (49) are not to be ruled out by UTF and their unacceptability is to be acccounted for by some other mechanism(s). If so, the possibility arises that in English, UTF applies to the output of *wh*-movement at LF, and then QR applies; UTF does not apply to the output of QR. In Japanese, UTF applies to the output of QR presumably because there is no relevant difference between *wh*-movement at LF and QR.[9] The approach along this line assumes that the LF-component is parametrically divided into several levels: the level at which *wh*-movement applies, the one at which filters apply, the one at which QR applies, etc. Syntactic evidence must play a role in determining this parametrized structure; for example, the fact that in Japanese, there is no syntactic *wh*-movement may have relevance to the undifferentiated *wh*-movement at LF and QR.

7. Concluding Remarks

It is important to recognize that the condition proposed in this paper, UTF, is on LF-representation and not on movement. In this respect it differs from what is sometimes called the Adjunct Condition, which is a condition on movement to the effect that no element may be extracted from an "adjunct."[10]

Furthermore, the definition of "adjunct" relevant to UTF is radically different from the intuitive notion of "adjunct" in that a base-generated complement becomes an "adjunct" relevant to UTF if it is moved somewhere by adjunction.

NOTES

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[1] All of the Japanese examples should be read with a normal intonation, i.e., without extra pauses or stresses, except otherwise indicated. It is D. Inagaki's insightful judgments on various sentences that gave this warning to me.

[2] Here and below, capital letters indicate heavy stress.

M. Okazaki pointed out to me that even if *ga* is unstressed, it is possible to interpret *eigo* as folcalized if *eigo* is stressed, and focalization by the stress on *ga* and one by the stress on an NP per se should be distinguished. We will not enter into this matter here, focussing on the focalization by the stress on *ga*.

[3] The first version of this rule is found in Chomsky (1976: 344).

[4] Arguments to the same effect are also found in McCawley (1988), who develops parallel arguments with regard to restrictive relative clauses as well. See below.

[5] That is, an Adjunct in the traditional sense. This bracketed phrase is presumably adjoined to a V-bar with which it forms another V-bar, hence falls within an Adjunct in our definition. This is supported by the fact that both *fall asleep* and *fall asleep during...* undergo what McCawley (1988) calls V-

bar deletion:

(i) a. although John fell asleep, I didn't Ø
(Ø=fall asleep)

b. although John fell asleep during Chomsky's class, I didn't Ø (Ø=fall asleep during Chomsky's class)

[6] I say "strictly," since not all speakers find sentences like (38) and (42) completely acceptable.

[7] This representation is due to May (1977). See May (1985) for a different representation.

[8] Or in COMP under S'(=COMP S), in the traditional analysis. The discussion in this section holds whether we adopt the traditional S-bar analysis or the CP analysis in Chomsky (1986).

[9] See Sano (1986) for an argument that *wh*-movement at LF in Japanese involves adjunction to a maximal projection, just like QR in general. See May (1985).

[10] See Chomsky (1986:31-34) for a relevant discussion. As far as I know, Fukuchi (1979) is the first to propose a condition (namely, X' Constraint) that is essentially the Adjunct Condition.

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